Work Ord August-01-13		5420	<b>7 1 0</b>	*10	5420*						Page 1	
Item ID: Revision ID: Item Name:	647.5710 GPS MOUNT	847.5' E1054	20	Accept	*N9000	14N	100	* s	etup Star	1/1	S1* S2*	· <del>***</del>
Start Date: Required Date Reference:	8/01/13 : 8/01/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item ID: Customer:	:						
Approvals:		n: <u></u>	•		Date			F	tun Star Sto		R1* R2*	
Sequence ID/ Work Center I	D	Operation Description	· · ·	Set Up/ Run Hours	Tool 1D	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	<del></del>
Draw Nbr	Revi	ision Nbr			·							
647.5700	N/C										<del></del>	
*100 *100* Bandsaw Jeaspa Bandsaw		BAND SAW  Memo  Cut Blank a	. 5.220"	0.00	ork 13/08/	09		_12	<i>لا</i>		- <del>-  </del>	
*110 *110* HAAS 1 HAAS CNC vertice	al machine#l	HAAS CNC VERTICAL  Memo  I-Machine p  DWG REV	per folio FB203	0.00	AS) 13/08/1	'1 <b>2</b> 3		12	<u> 18</u>		(Att	uled

2- deburr and break all sharp edges

NCR: Y	/es	/ No				WORK ORDER NON-O	100	NFORM	ANCE / UPDA	\TE	•		7.
											QA Closed:	Date	
Work Orde	. r ·					DISPOSITION				AGAINST DEI	PARTMENT	PROCESS	
Part N	-					Rework Scrap Use-as-is		ľ	Skid-tube Machining noforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR 1	No.					Work Order Update		1	· —	Composite	nec/stor	Supplier	
Root					Descri	ption of work order update	1	Initial	Action	ı	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Descript	tion	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
опарргочец	<b>.</b>			<u>                                     </u>			AUL	T CATE	GORY				J
Landi	ne G	iear				General							
		Bending Centre No Cracks Crushed/ Cuffs Heat Trea	Crimped at		D/S	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short	-	<b>-</b>	on Incomplete ions Incomplete/Unc nance led	dear	Ovalized Over/Under Part Incorrec Part Lost/Mi Part Moved Positioned W Power Loss/S	st ssing drong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	$\vdash$	Ripples in		rube	H	Drill Holes	$\vdash$	Offset	•	L	. 04401 20337.		Tarantan

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

·Work Order ID 105420 \*105420\* Page 2 August-01-13 11:35:01 AM Accept \*N900040100\* Setup Start Item ID: 647.5710 Revision ID: Stop **GPS MOUNT** Item Name: \*12\* Start Date: 8/01/13 **Start Oty: 12.00 Cust Item 1D:** Required Date: 8/01/13 Req'd Qty: 12.00 Customer: Reference: Run Process Plan: \_\_\_\_\_ Date: Tooling: Date: Approvals: Stop SPC (Y/N): Date: \_\_\_\_\_ Date: QC:\_\_\_\_ Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Qty Code Qty Number Stamp Work Center ID Description Run Hours 120 QC2-Inspect parts off machine FAI/FAIB 0.00 \*120\* 13/08/12 OC Memo Quality Control 130 QC8- Inspect parts - second check 13/08/13 \*130\* QC Memo **Quality Control** 0.00 131 Lece-milatures \*121\* 0.00 HandFinish Hand Finishing CLEAN AND REMOVE ALL PART MARKING

											DQA	: Date	e.
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE			•
						<del></del>					QA Closed	: Date	e:
Work Ord	er.					DISPOSITION				AGAINST D	EPARTMEN	T/PROCESS	
WOIN OIG						Rework	7		Skid-tube	Crosstube	7	Water Jet	Engineering
Part I	No.					Scrap	1		Machining	Small Fab	Pr	od. Eng. Coor.	Quality
						Use-as-is	1		noforming	Finishing	-1	ore/Packaging	Other
NCR (	No.					Work Order Update			Large Fab	Composite	<b>_</b>	Supplier	
Root			T		Descri	tion of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Cr	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator			1								ļ		
Material													
Setup											ŀ		
Other						_							
Process						•		İ					
Supplier							-						
Training													
Unapproved			ļ <u>"</u>										
				•		<u> </u>	FAUI	LT CATE	GORY	<u> </u>			
Landi	ing (	Gear				General		_		_	_	_	<del></del>
	L	Bending			L	Bend		Grain		L	Ovalized		Pressure/Forced
	L	Centre N	ot Conce	ntric to C	D/S	BOM/Route	<u> </u>	Hardwa	re		Over/Unde	r tolerance	Temperature/Cure
		Cracks				Broken/Damaged		1	on Incomplete		Part Incorr	<u> </u>	Weld
		Crushed/	Crimped		L	Burrs	L	4	ions Incomplete/	Unclear	Part Lost/N	1issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance	L	Part Move	i	
	L	Heat Trea	at	•		Countersink		Mislabe	led		Positioned	Wrong	_
}		Inspectio	n Strip in	Tube		Cut Too Short	1	Misread	}		Power Loss	/Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

Quality Control

										DQA:	Da	te: _	,
NCR: Y	res / No				WORK ORDER NON-	COI	NFORM	MANCE / UPDATE			_		•
							_			QA Closed:	Da	te:	
Work Orde	ar.				DISPOSITION			AGAIN	NST DE	PARTMENT	/PROCESS		
WOIK Olde	·		•		Rework	7		Skid-tube Crosstu	امط	1	Water Jet		Engineering
Part N	in				Scrap	1		Machining Small I		Pro	d. Eng. Coor.	H	Quality
10111					Use-as-is	1		noforming Finish	<u> </u>	4	e/Packaging	Н	Other
NCR N	No.				Work Order Update	1	1	Large Fab Compos	~⊢	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Supplier	—	
						J		,		1	,,		اسما
Root				Descri	iption of work order update		Initial	Action		Sign &	· · · · · · · · · · · · · · · · · · ·		
Cause	Date	Step	Qty	] ,	or Non-conformance	Ct	nief Eng	Description		Date	Verification	n	QC Inspector
Doc/Data													
Equip/Tooling													
Operator						l					:		
Material												-	
Setup													
Other				1									
Process	Ш												
Supplier						ł							
Training		İ											
Unapproved				<u> </u>		<u> </u>						$\perp$	
						AUI	LT CATE	GORY					
Landi	ng Gear				General	_	<b>.</b>		_	1	1	<u> </u>	
	Bendin	_			Bend	<u> </u>	Grain		<u> </u>	Ovalized		${oldsymbol{ iny}}$	Pressure/Forced
	<del></del>	Not Conce	ntric to	o/s	BOM/Route	<u> </u>	Hardwa			Over/Under		$\vdash$	Temperature/Cure
	Cracks			<u> </u>	Broken/Damaged	<u> </u>	4 '	on Incomplete	<u> </u>	Part Incorred		$\boldsymbol{H}$	Weld
		d/Crimped		<u> </u>	Burrs	_	-1	ions Incomplete/Unclear	<u> </u>	Part Lost/Mi	ssing	'لـــا	Wrong Stock Pulled
	Cuffs				Contamination		Mainte	nance		Part Moved			

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Positioned Wrong

Power Loss/Surge

Other

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Turning Sequence 📐

Wave/Twist in Tube

Torque Waves in Extrusion

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord		5420		*105	5420*						Page 4
Item ID: Revision ID: Item Name:	647.5710 GPS MOUNT			Accept	*N900	<b>040</b>	100	<b>)*</b> s	etup Star Stop	IV	S1* S2*
Start Date: Required Date Reference:	8/01/13 : 8/01/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:					
Approvals:	Process Pla	n:	Date:	Tooling: _ SPC (Y/N):		nte:		R	tun Star Stoj	1/7	R1* R2*
Sequence ID/ Work Center I 180 *180* Packaging Packaging		Operation Description Identify as per dwg & Sto  Memo ***IDENTIF	ck Location: <u>57 4</u> 16 Y AS PER APICAL MPP-	Set Up/ Run Hours 0.00 0.00 120 BY STAMPING P	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp 33 13-09-04
190 <b>*100*</b> QC Quality Control		QC21- Final Inspection -	Work Order Release	0.00					17	9/0	4

22 I B

NB095

NCR: Y	es	/ No				<b>WORK ORDER NON-</b>	COI	NFORM	MANCE / UP	DATE			•
									-		QA Closed:	Date:	
Work Orde	r:		-			DISPOSITION			, <del>-</del> , -	AGAINST DI	PARTMENT,	/PROCESS	
Part N NCR N	- lo					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	<b>-</b>	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	Ī				Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	C	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved							AUI	LT CATE	GORY				
Landir	$\overline{}$				_	General	_	7		_	- <b>-1</b>	_	1
	二		ot Conce	ntric to O	/s	Bend BOM/Route Broken/Damaged		Grain Hardwa		-	Ovalized Over/Under Part Incorred	<b>├</b>	Pressure/Forced Temperature/Cure Weld
<b> </b>	$\neg$	Cracks Crushed/	Crimned		-	Burrs	$\vdash$	<b>⊣</b> `	on Incomplete ions Incomplete/I	Unclear —	Part Lost/Mi	<del>-</del>	Wrong Stock Pulled
		Cuffs	Cimped		<del>  -</del>	Contamination	$\vdash$	Mainte	•		Part Moved		1on@ Stock   direct
1 1	-	Heat Trea	at			Countersink	$\vdash$	Mislabe		<u> </u>	Positioned V	Vrong	
	-	Inspectio		Tube		Cut Too Short		Misread		<u> </u>	Power Loss/		Other
		Ripples in	•			Drill Holes		Offset			_	-	
	_	Torque W		Extrusion		Drawing		Out of O	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

Folio

**Picklist Print** 

August-01-13 11:35:01 AM

Work Order ID:

105420

Parent Item:

647.5710

Parent Item Name:

**GPS MOUNT** 

Start Date: 8/01/13

Required Date: 8/01/13

Page 1

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP REV: A NEW ISSUE JFS 13/07/31 VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B2.750X03.750	· · · · · · · · · · · · · · · · · · ·	Purchased	No			100	f	0.0000	0.435	5.494736	4		
6061-T6 BAR 2.75 X 3.75	5											·	

M114834 x 5.5 and 13/08/08

NCR:	Yes	-	No
IACIV.	163	•	INU

														; ,
											DQA:	Date	e:	•
NCR: Ye	s / No				<b>WORK ORDER NON-</b>	COI	NFOR	MANCE / UP	DATE					
										(	QA Closed:	Date	e:	
Work Order	:				DISPOSITION				AGAINST	DEP	ARTMENT	/PROCESS		
Part No	).				Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube  Machining noforming Large Fab	Crosstube Small Fab Finishing Composite			Water Jet d. Eng. Coor. re/Packaging Supplier	Engineeri Qual Oth	lity
Root	<del></del>	1	1	Descri	ption of work order update	1 1	nitial	Ac	tion		Sign &	<u> </u>		,
Cause	Date	Step	Qty		or Non-conformance	1	ief Eng	ļ	ription		Date	Verification	QC Insp	ector
Ooc/Data		<u> </u>											<u> </u>	
quip/Tooling	·				•						Í			
perator														
//aterial														
etup		1												
ther														
rocess		ł												
upplier										Ì				
raining		1												
Inapproved														
						FAUL	T CATE	GORY			_			
Landing	g Gear			_	General		-					_		
L	Bending				Bend		Grain			LJ'	Ovalized		Pressure/Fo	rced
L	Centre N	ot Conce	ntric to (	D/S	BOM/Route		Hardwa	ire		Ц	Over/Under	tolerance	Temperature	e/Cure
L	Cracks				Broken/Damaged		Inspecti	ion Incomplete			art Incorre	ct	Weld	
	Crushed/	Crimped			Burrs		Instruct	ions Incomplete/	Unclear	∐l <sup>F</sup>	Part Lost/Mi	issing	Wrong Stock	c Pulled
	Cuffs				Contamination		Mainte	enance		Ш	Part Moved			; 
_	Heat Trea	at			Countersink		Mislabe	eled		ll.	Positioned V	Vrong		
	Inspectio	n Strip in	Tube		Cut Too Short		Misread	1			Power Loss/	Surge	Other	
	Ripples in	n Bend		L	Drill Holes		Offset			_		<u></u>		
	Torque V	Vaves in E	extrusio	ո [	Drawing		Out of (	Calibration		_				
	Turning S	Sequence			Finish		Out of 9	Sequence		_				
Γ	Wave/Tw	vist in Tul	oe .		Folio		Outside	Dimensions						

NOTES:

MATERIAL: 5061-76 ALUMINUM PER AMS-QQ-A-200/8

finish: hard anodize IAW MIL-A-8625 TYPE H CLASS 2, COLOR BLACK: CARDINAL 4860-50 PRETREATMENT PRIMER: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX



MATERIAL: LAMINATED ALUMINUM 1100 ALLOY SH.M STOCK LAYER THICKNESS: .003"
FINISH: NONE
VENDOR: McMASIFR-CARR P/N 9574K68

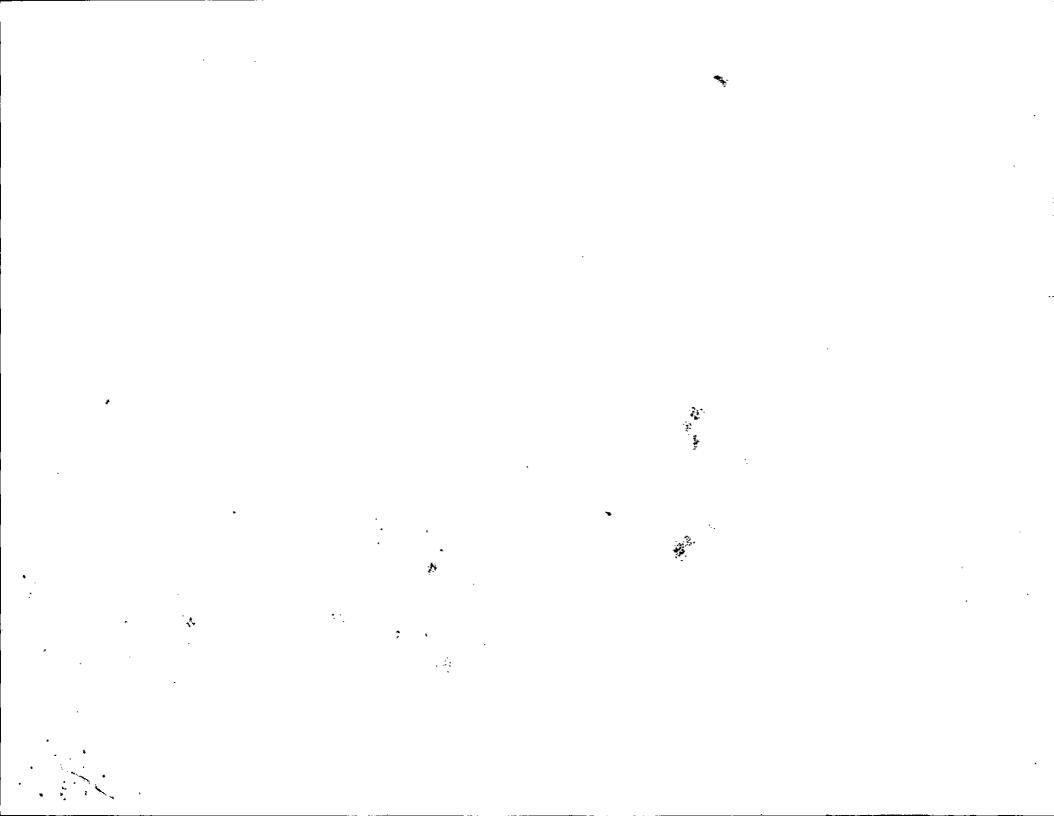
1 6 1

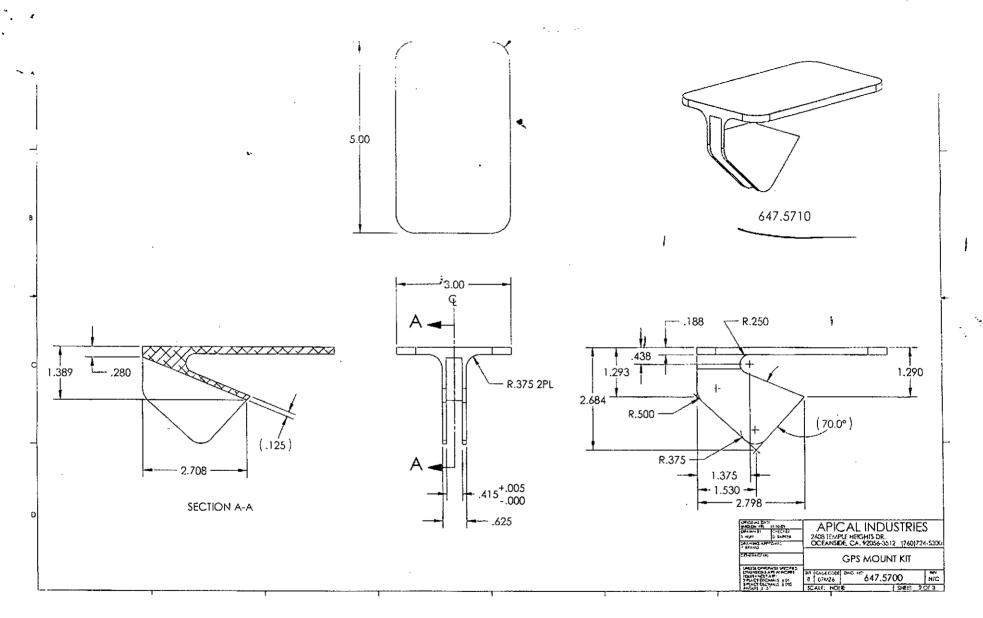
- 4. DEBURR AND BREAK ALL SHARP EDGES
- 5. IDENTIFY IAW MPP-120

647.5701 GPS MOUNT KIT

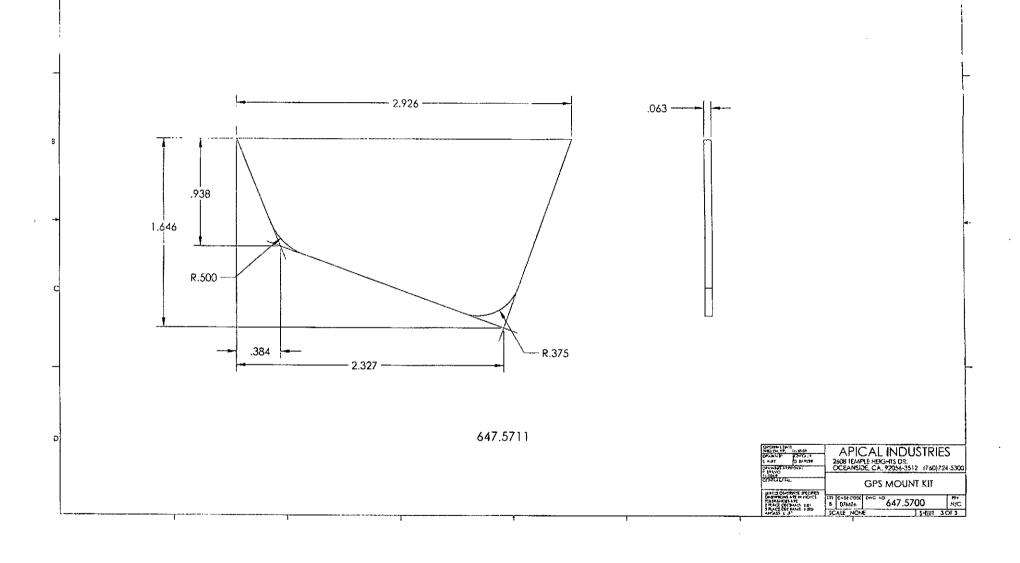
105420 MUJ

				•	13 00	-0(
Т	1	5	647.5711	SHIM		
1	2	4	601.2973	LOCKNUT	MS21042-06	
	4	3	601.2764	WASHER	HEATTH OF THE STORE	
Т	2	2	601,3081	SCREW	A5527039-3514	
T	ī	1	647.5710	GPS MOUNT		A
Т	$\sim$		647.5701	GPS MOUNT KIT	T	
T	Trú:	FIND #	PARI #	DESCRIPTION	MATL	SPFC.
G	אונ			PARTS LIST		
NEX	T ASSY (S)	(MO-) 0844 1 Hz		2608 THAPLE HER	INDUST 3HTS DR. 92056-3512 (7	
	•	- 1757		GPS GPS	MOUNT K	IT
		55	TO CHAPTE SHE CAN HATCHES ARE SHE ICHE FANCE ARE SHE ICHE FOR CHAPTER AND A COM- ICHE CHAPTER AND A COM-	8 075/16	647.5700	N/C





·			
			N.
		•	
•			
• •			





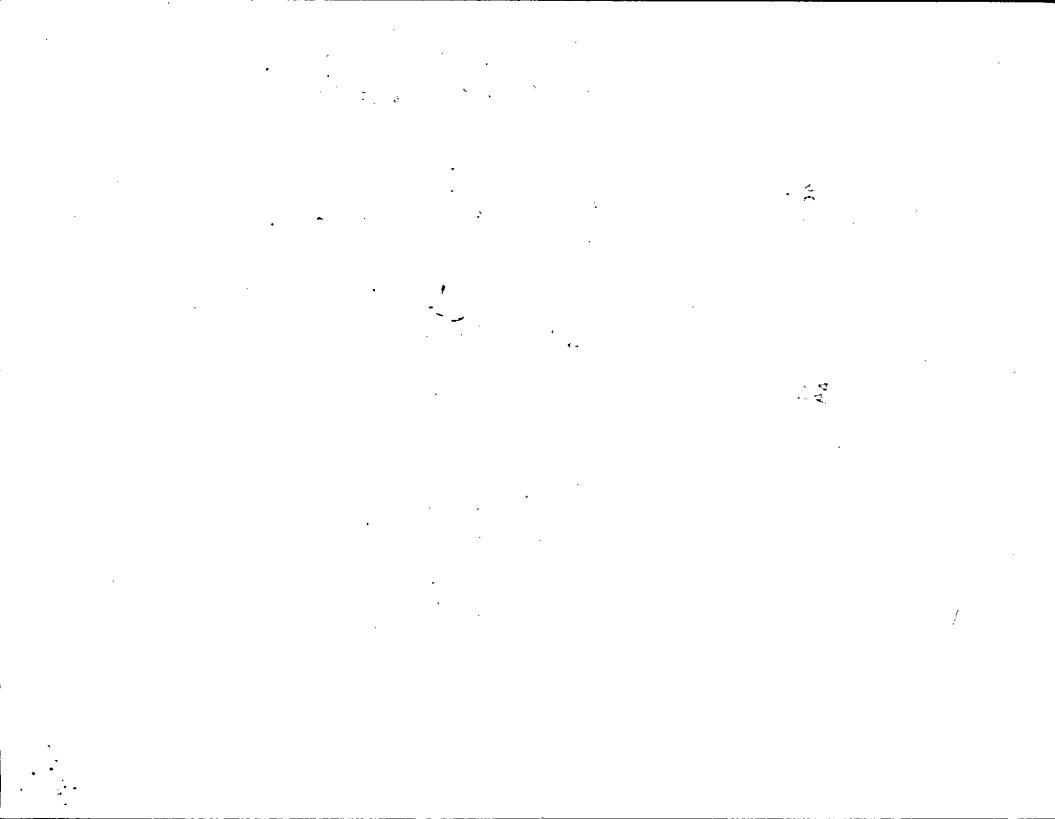
DART AEROSPACE LTD	Work Order:	105420
Description: GPS HOUNT	Part Number:	647.5710
Inspection Dwg: 647.5700 Rev: 1/C		Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
5.00	.010	5.001			VERW	PHD-12
1389	±.005	1.386	1		H. GAGE	
. 280 2.708	+ .00S + .00S	282	<u>/</u>		11	
2.708	± .005	2 711			H GAGE	
.125	t .005	. 122	/	,	1ERN	840-12
<u> </u>	ļ., ———	2 007			\langle	0
3.00	4 .610	2.997	1		VEAU	840-12
.415	1.005	. 416			G. RIN	0
-625	+ .oos	_ G22			NEW	B4D-12
.183	±.005	- 191			VEW	PHO-12
2.799	t.005	2.798	/		11	13
1.375	±.005	1.375			1(	•,
	<u> </u>					
	<u> </u>			-		
	<u> </u>					
·		<u> </u>				
		<u> </u>				
1	<u> </u>	.1	1	1	<u> </u>	<u></u>

	V/V)	NS	
Measured by:	9-89	Audited by:	Preliminary Approval:
Date:	13/08/12	Date: 13/08/13	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	



## Jean-Luc Menard

From:

Pablo Bravo

Sent:

August-13-13 12:09 PM

To:

Jean-Luc Menard

Subject:

**RE: 647.5710 DEVIATION** 

The part gets match drilled onto the deflector, so it should be okay.

## Pablo

From: Jean-Luc Menard

Sent: Tuesday, August 13, 2013 5:10 AM

To: Pablo Bravo

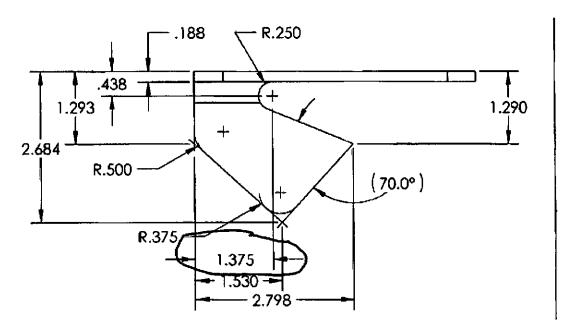
Subject: 647.5710 DEVIATION

## Hi Pablo,

Here is another one,3 parts were affected when proofing the cnc program.1.375" Dimension is 1.395". Let me know if this is acceptable.

 $\mathsf{THX}$ 

JL



#### Jean-Luc Ménard

**Production Engineering Supervisor** 

#### **DART AEROSPACE**

T 1613632-5200 > 227

F 1613632-5246

1 800 556- 4166

www.dartaerospace.com

			•	
	·			
,				
•				
•				

# **Chantal Lavoie**

From:

Nigel Forbes

Sent:

Wednesday, August 14, 2013 8:05 AM

To:

Chantal Lavoie

Subject:

ATG

Hi,

As discussed, all parts going to ATG do not require cleaning prior to the delivery. ATG will clean and prepare the parts prior processing.

Thanks1

Nigel





A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

# Pack List

Number: 62596

Date: 30-Aug-13

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

111. 010-002-02	1 ax. 013-032-1103	FII.	013-032-3200	1 ax. 015-052-1105	
Terms		Ship Via			
•					
Quantity	Description	•			
1 lot	Part: ASST		Rev:	•	
	10 PCS 646.3012 4 PCS 646.3310 6 PCS 646.3312 20 PCS 646.3610 11 PCS-646.3812 12 PCS 647.5710				
	23 PCS 646.9710 5 PCS 647.9711 14 PCS 646.9712 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2	·			
	PRIME MIL-P-23377J TYPE I CLA Job: 20130542	SS N PO: 20929	Line:		
	Certificate of Col  A.T.G. Industries certifies that all items with all requirements, specifications and ISO 9001 : 2008 RE ATG SALES-2010 TO DATE : 30/8/13  CERTIFIED SIGNATURE : RECEIVER SIGNATURE :	in this shipment are in co d drawings referenced in t GISTERED ERMS APPLY			

